Illinois Tool Works Inc.
Corporate Headquarters
3600 West Lake Avenue
Glenview, IL 60026-1215
Telephone 847.724.7500

ITW

August 17, 2006

Ms. Karen Cibulskis
Remedial Project Manager
U.S. EPA Region 5 - Superfund Division
Mail Code SR-6J
77 West Jackson Boulevard
Chicago, IL 60604

Re: ASAOC for RI/FS - Notification of Consultants
South Dayton Dump and Landfill Superfund Site - Moraine, Ohio

Dear Karen:

Pursuant to the Administrative Settlement Agreement and Order on Consent (ASAOC) for Remedial Investigation/Feasibility Study (RI/FS) for the South Dayton Dump and Landfill Superfund Site (Site), this letter notifies U.S. EPA that the Respondents have selected Conestoga-Rovers and Associates (CRA) as the primary environmental consultant for the Site. A corporate profile which describes CRA's capabilities and experience is included as Enclosure A to this correspondence. Names, titles and qualifications of the primary CRA personnel that will be involved in the RI/FS for the Site are included as Enclosure B to this correspondence. Other contractors, subcontractors and laboratories for RI/FS Work at the Site have not yet been selected. Names, titles and qualifications will be submitted to U.S. EPA promptly upon their selection. Respondents anticipate Severn Trent Laboratories (STL) will be selected for analytical work but this has not yet been confirmed. STL has numerous facilities with U.S. EPA Contract Laboratory Program (CLP) credentials.

Please contact me at 847-657-4843 or kbrown@itw.com for questions or discussion.

Sincerely,

Ken Brown, CHMM
Environmental Engineer

Enclosures

cc: Representatives for Respondents

Enclosure A

CONESTOGA-ROVERS & ASSOCIATES

CORPORATE PROFILE

Prepared by:
Conestoga-Rovers
& Associates

AUGUST 2005
REF. NO. 7200 (8)

web: http:\\www.CRAworld.com

TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF TABLES

1.0 CORPORATE OVERVIEW

Conestoga-Rovers & Associates (CRA) provides comprehensive engineering, environmental consulting, construction, and information technology (IT) services. CRA employs more than 2,000 people in over 60 offices, working on projects around the world. Since its establishment in 1976, CRA has provided practical, innovative, and effective services in such areas as environmental site assessment and remediation, environmental data management, regulatory compliance and permitting, environmental health and safety, solid and hazardous waste management, air quality management, and municipal infrastructure planning and design.

Because CRA is a technical service organization, our employees are our most valuable asset. CRA's diversified staff is committed to providing high quality services through a team approach, hands-on experience, and technical expertise. Over the years, we have developed a reputation for delivering technically sound solutions on time and within the established budget.

Corporate responsibility and accountability, technical excellence, and a commitment to consistent, superior services have proven to be a major factor in CRA's outstanding, worldwide reputation, one which will enable the corporation to manage a future of continued growth and the provision of expert services to its clients. It is our common goal to meet and exceed the expectations of our clients and to accomplish this in a responsive, safe, and cost-effective manner. We have built a solid reputation over the years based on hard work and discipline. Our commitment to client satisfaction and responsiveness is a cornerstone of our organizational and project management philosophy, which embraces a flat, non-hierarchical structure in which the Shareholders and senior management actively direct our project work and interaction with clients.

As a testament to the company's stability and reputation, a high percentage of CRA's ongoing work for the last 10 to 20 years has been with repeat clients. Under our ISO 9001:2000 client feedback survey, over 96 percent of respondents indicated that CRA's overall performance was Good or Excellent, with over 97 percent responding that CRA met or exceeded their expectations.

2.0 CORPORATE SERVICES

CRA's services have evolved and grown through the broad spectrum of needs that have been identified by our clients. Our general areas of service are described in the following sections.

2.1 ENGINEERING

CRA's diversified team of engineers offers a wealth of experience in developing both traditional and innovative solutions to engineering projects. The company has more than 25 years of experience in managing a full range of engineering projects from very simple single disciplinary projects, to complex, multi-disciplinary, multi-million-dollar projects.

Design services personnel have the necessary core expertise from both the technical/theoretical and practical/implementation sides to fully meet the specific requirements of a project. We offer responsive and cost-effective engineering services ranging from conceptual design to the development of plans and specifications, contract administration, construction supervision, and operations.

An overview of our engineering services is provided below.

2.1.1 CIVIL ENGINEERING

CRA's civil engineering services range from planning, design, surveying, and contract management to field construction services. The following areas are those in which CRA has the experience to help clients realize efficiencies in both construction time and capital costs:

- Water distribution, including infrastructure needs studies and assessments
- Supervisory Control and Data Acquisition (SCADA) Systems
- Water efficiency, conservation programs, and water supply master plans
- Sewage collection including municipal and private sanitary systems
- Pump stations, forcemains, and inflow/infiltration studies
- Sewage treatment plant design, troubleshooting, and efficiency studies
- Storm drainage and stormwater management

- Urban, rural, and agricultural drainage systems
- Local and arterial roadwork experience
- Bridge design, assessment, and rehabilitation
- Traffic impact assessments and pavement design
- Commercial and institutional site development
- Industrial and residential land development and subdivisions

2.1.2 ELECTRICAL ENGINEERING

CRA's electrical and instrumentation personnel have extensive experience in the design, installation, and evaluation of electrical and process control systems for industrial, commercial, and manufacturing facilities. We can offer design and procurement services and determine the impact of plant modifications and expansions to existing facilities. Major services include:

- Electrical system design criteria
- Equipment and material procurement specifications
- Installation guidelines, specifications, and scopes
- Standby power generating systems including parallel switchgear
- Motors and motor controls (electromechanical and solid state)
- Wiring (cable tray, conduit, and cable) systems
- Evaluation and design for control systems to improve process control and efficiency
- PLC and HMI programming
- Remote telemetry and automation

2.1.3 GEOTECHNICAL ENGINEERING

CRA provides comprehensive geotechnical engineering investigation and design services for shallow and deep foundations, earthwork and embankment designs, and on-site quality control and construction supervision services. Specific areas of expertise include:

- *Geotechnical investigations to identify soil, rock, and groundwater conditions*
- Behavior evaluations of conventional foundations, piles, caissons, temporary and permanent earth-retaining structures, supported slopes, landfill, earth dikes, raft foundations, highways, roads, large diameter culverts, wharves, and storage tanks
- Instrumentation and analysis of foundations, earth-retaining structures, and embankments
- Expertise in special construction methods
- Failure analysis and remediation scenarios for retaining walls, slopes, and shorelines
- Geotechnical testing laboratory
- Cost analysis, budget estimates, management, and design of earthworks
- Vibration and blasting control
- Flexible and rigid pavement design and rehabilitation

2.1.4 PLANT ENGINEERING

CRA personnel have the experience and expertise to provide our clients with the necessary support for major facility expansions, as well as smaller plant modifications. We perform plant engineering projects ranging from 1-day troubleshooting to multi-million-dollar turnkey expansions, on time and within budget. Our personnel have the experience to design, install, and document process improvements. In addition, specialists can be placed on site on an hourly basis to fulfill our clients' short-term needs. Major areas of service include:

- Preliminary studies and appropriate grade estimates
- Process engineering design
- Process evaluation and optimization
- Engineering flowsheets (P&ID and mass balances)
- Mechanical, electrical, civil, and structural engineering projects
- Utilities generation and distribution
- Material handling system, mechanical vessel, and equipment integrity assessment
- HVAC design
- Electrical substations, switchgears, motors, and motor controls
- Evaluation and troubleshooting of existing installations
- Instrumentation engineering - specification and loop design

- PLC/HMI programming
- Building design, containment structures, geotechnical analysis, and design
- CADD expertise
- Safety and industrial hygiene
- Total project management including purchasing, expediting, field construction supervision, startup support, and troubleshooting assistance

2.1.5 WATER/WASTEWATER TREATMENT

CRA offers comprehensive services for the design, construction, and operation of cost-effective water and wastewater treatment facilities. These services are provided to optimize, upgrade, or expand existing industrial, municipal, or remedial treatment facilities, and to design new treatment facilities for specific waste streams. CRA's capabilities and expertise in wastewater treatment include:

- Conventional and advanced biological systems
- Biological nutrient removal
- Pre-treatment of sewer discharges
- Treatment of contaminated groundwater
- Landfill leachate treatment
- Characterization and treatability studies
- In-house laboratory support
- Process audits and optimization
- Water conservation and wastewater minimization
- Sludge and other residuals management
- Plant commissioning and operator training

2.2 ENVIRONMENTAL

Since CRA's involvement in the Love Canal project in Niagara Falls, New York beginning in the late 1970s, we have established a tremendous reputation for excellence in the environmental field. Through a commitment to environmental responsibility, our environmental expertise is applied to effectively address historical contamination problems, as well as to prevent the creation of new problems.

As environmental regulations have developed and innovative technologies have evolved, CRA has always respected its clients' mandate of cost-effective environmental responsibility with careful regard for protection of the public and the environment. Our environmental services incorporate the assessment and cleanup of historical contamination and the planning and design of new facilities to achieve and maintain environmental compliance. An overview of these services is provided below.

2.2.1 AIR QUALITY MANAGEMENT

CRA has thorough and substantial experience in complying with air quality regulations. A core group of professionals is dedicated to assisting our clients with air quality management services in the following major areas:

- Emission inventories
- Emission control systems
- Permitting
- Ambient air quality and air toxic standards
- Source testing and monitoring programs
- Compliance auditing
- Environmental impact analysis
- Accidental release and risk management programs
- Indoor air and industrial hygiene
- Odor assessments
- Noise assessments

2.2.2 ENVIRONMENTAL SITE ASSESSMENT/DUE DILIGENCE

All phases of Environmental Site Assessments (ESAs), Environmental Management Systems (EMSs), property audits, and multi-media compliance audits are conducted by CRA. CRA's specialists are knowledgeable on and experienced with applicable environmental laws and regulations. Typical assessment, compliance, and management system services include:

- Phase I and Phase II ESAs in accordance with applicable standards
- Environmental Compliance Audits (ECAs)
- Development and implementation of Environmental Management Systems (ISO 14000)
- Occupational safety and health audits
- Sampling and monitoring programs
- Multi-media regulatory compliance evaluations
- Waste handling assessments
- Building hazardous materials assessments

2.2.3 ENVIRONMENTAL REMEDIATION

CRA provides extensive services in the assessment, remedial plan development, and remediation of contaminated sites. Our staff has up-to-date knowledge of applicable environmental laws and regulations. They are experienced in applying engineering principles and specialty skills to develop solutions for a range of contaminated site conditions. CRA's services in this area include:

- Comprehensive site investigation programs
- Remedial alternative evaluations/feasibility studies
- Remedial design, treatability, and/or pilot studies, and implementation
- Decommissioning of facilities
- Brownfield redevelopment
- Preparation of hazardous waste facility permit applications
- Multi-media sampling and analytical support
- Environmental risk assessments
- Development of cleanup criteria

2.2.4 FACILITY DECOMMISSIONING AND DEMOLITION

CRA provides services for all phases of facility decommissioning and demolition, including preliminary site evaluations, building and subsurface (soil, water, utilities, and buried waste) investigations, management of environmental remediation,

decommissioning, demolition, and property restoration activities. CRA's facility decommissioning and demolition services include:

- Asbestos surveying and abatement planning
- Aboveground and underground storage tank closure
- Structural integrity audits
- Redevelopment of idled and/or abandoned industrial properties (Brownfield sites)
- Utility and process system audits
- Decommissioning and demolition scheduling and supervision
- Negotiation of cleanup criteria
- Air monitoring programs

2.2.5 LABORATORY AND TREATABILITY TESTING

CRA operates comprehensive environmental testing and treatability study facilities in London, Ontario and Niagara Falls, New York. These facilities include laboratories for general analytical and chemical treatment testing, specialized areas dedicated for working with toxic and hazardous materials, clean rooms for biological treatment simulation and fermentation support, and a scale-up area for process development and pilot testing. These laboratories strongly complement CRA's environmental engineering and industrial hygiene expertise, particularly in the assessment, management, and remediation of environmental microbiology problems related to drinking water supply and treatment systems, multi-media remediation programs, wastewater treatment systems, air quality, pathogen assessment, and mold contamination. The laboratories provide technical experts and maintain state-of-the-art equipment to support the following services:

- Air quality assessment (bio-aerosol, depositional, and liquid impinger sampling)
- Biofouling and pathogen detection, identification, and quantification
- Drinking water, surface water, and groundwater quality evaluation
- Industrial and municipal wastewater treatment evaluation
- Water disinfection system efficacy testing
- Biological system failure assessment and operation optimization
- *Cryptosporidium* and *Giardia* testing

- Biological treatment simulation utilizing soil microorganisms, soil columns, and slurry bioreactors
- Computerized respirometry testing for biological systems degradation evaluation
- Soil vapor extraction/air sparging evaluation and modeling
- Sludge filtration testing
- Anaerobic chamber for denitrification testing
- Chemical dechlorination process scale-up
- Solvent extraction screening
- Soil washing evaluation
- Chemical fixation, solidification, and stabilization screening
- Groundwater treatability testing
- Methods development for non-standard analyses
- PCB and dioxin/furan congener profiling
- Waste characterization

2.2.6 UNDERGROUND STORAGE TANK MANAGEMENT

CRA has extensive experience in the management of Underground Storage Tanks (USTs). CRA has investigated more than 2,500 UST sites and we are able to assist our clients with all aspects of effectively managing UST issues, including the design and permitting of new installations. Services have ranged from simple removal actions to comprehensive site-wide soil and/or groundwater investigation and remediation. CRA's general UST services include:

- Permitting
- Emergency response
- Site investigation and containment assessments
- Risk-based corrective action evaluations
- Corrective action plans/closures
- Full design and construction capabilities
- Operation and maintenance of remedial systems
- Trust/indemnity fund reimbursement assistance

2.2.7 INDUSTRIAL HYGIENE AND SAFETY

CRA's safety and industrial hygiene specialists have a broad base of experience in all types of industrial, private, and environmental applications. CRA provides the following safety and industrial hygiene services:

- Assessment of employee exposure to hazardous substances
- WHMIS and employee right-to-know training
- OSHA worker training programs (40-hour, supervisory, and refresher)
- Respirator fit testing and training
- Accident and injury investigations
- Litigation support
- Health and safety plans and site safety officer services
- Health and safety compliance audits
- Material safety data sheet program management
- Noise evaluations and program management
- Asbestos investigations and program management
- Indoor air quality investigations

2.2.8 REGULATORY COMPLIANCE, PERMITTING, AND AUDITING

CRA has developed a long-standing reputation for helping its clients meet or exceed environmental regulatory requirements. Our professionals are familiar with major compliance and permitting issues at all regulatory levels across North America and throughout an expanding international market. Services include:

- Regulatory compliance analysis
- Comprehensive environmental permitting
- Facility compliance audits
- Safety and industrial hygiene programs
- Compliance monitoring and reporting

2.2.9 SOLID WASTE MANAGEMENT

CRA has significant experience in all areas of solid waste management. CRA's involvement includes landfill siting and approvals assistance, participation in legal proceedings regarding approvals and preparation of conceptual and detailed designs of landfills for public and private sector clients. Several senior CRA professionals were the primary authors of a textbook (Solid Waste Landfill Engineering and Design, Prentice Hall, 1995), which is used by academia and industry as a teaching tool. CRA has also developed guidance documents in the area of landfill gas management for Environment Canada and the World Bank. CRA's specific areas of expertise in solid waste management include:

- Landfill design and operation
- Waste management planning and landfill site location
- Leachate collection and treatment systems
- Landfill gas recovery and utilization
- Evaluation of landfill gas and leachate migration
- Odor, noise, and air emission assessments and abatement
- Landfill closure plans
- Design and implementation of monitoring plans

2.3 CONSTRUCTION

Engineering design and construction services are provided for a variety of commercial, industrial, and municipal projects. CRA provides the full scope of possible project delivery methods including advisory, conventional construction management, design-build, design-build-operate, and design-build-own-operate. A key to the successful implementation of any construction project is the proper management of resources and the sharing of expertise between the engineering/environmental design and construction fields. CRA has developed a strong group of highly qualified personnel who have the unique capability to blend the technical design expertise with practical constructability issues, to meet the goals of our clients. Our construction experience is further described below.

2.3.1 MUNICIPAL INFRASTRUCTURE

CRA offers a complete range of services to municipal, commercial, industrial, and development clients for the engineering of new or the rehabilitation of existing infrastructure works. CRA's infrastructure services include:

- Design/rehabilitation of storm and sanitary sewer systems
- Sewer inflow/infiltration investigations
- Water storage and distribution systems
- Water and wastewater treatment
- Design of bridges and roads
- Rehabilitation/reconstruction of existing road systems
- Trenchless technologies for replacement of services
- Functional planning and road studies
- Intersection improvements
- Industrial/residential subdivision design
- Site surveys and drainage plans
- Stormwater management

2.3.2 REMEDIATION SYSTEMS

CRA offers extensive expertise in the design, implementation, and management of environmental remediation programs. CRA has successfully conducted over 2,500 environmental cleanups of various sizes and complexities under voluntary actions, cooperative actions with environmental agencies, and enforcement actions. CRA selects and evaluates potentially applicable remedial alternatives that meet appropriate cleanup objectives. Work plans and designs are prepared and negotiated, as required, with the appropriate environmental agencies. CRA's guiding principle on any project is to develop and implement the most efficient and cost-effective remedial solution to an environmental situation. CRA's site remediation services include:

- Groundwater extraction, process design, and treatment systems
- In situ treatment using biological or physical systems
- Hydraulic containment/barrier walls
- Capping/containment systems

- Waste solidification/stabilization
- Excavation and handling of contaminated soils and sludges
- Thermal soil treatment (high and low temperature)
- Soil vapor extraction and treatment
- Dual phase treatment
- Air sparging and biosparging
- Bioremediation and land farming
- Intrinsic remediation
- Drummed waste management

2.3.3 OPERATION AND MAINTENANCE

CRA provides a full range of services related to operation and maintenance of various treatment and remediation systems. These services range from design, construction, and on-site operation of treatment systems to reporting and emergency response activities. Operation and maintenance services are provided by CRA for the following:

- Groundwater remediation treatment systems
- Municipal water and wastewater treatment systems
- Landfill leachate treatment systems
- Landfill gas treatment and utilization systems
- Soil vapor extraction and air sparging systems
- Bioremediation systems
- General site maintenance activities

2.4 INFORMATION TECHNOLOGY SERVICES

CRA's eSolutions Group integrates many of the information technology (IT)-related services offered by CRA such as environmental data management, geographic information systems, environmental visualization, software development, and electronic graphics design. Our main objective is to provide unique and user-friendly electronic data handling, data access, and data communication solutions for our clients.

Our professional staff offers expertise in a number of key information technology areas including:

- Environmental data management
- Remote sensing
- Geographic Information Systems (GIS)
- e:DAT™ (Electronic Data Access Tool)
- e:DAT ER™ (Emergency Response)
- Waste Manager™
- openRTU™
- Three-dimensional visualization
- Software development
- Graphics design
- Internet/Intranet services

2.4.1 ENVIRONMENTAL DATA MANAGEMENT

One of the most important capabilities developed by CRA has been the effective management of environmental data. Our solid reputation as an environmental consulting firm is based on our ability to maintain accurate databases of information collected for our clients. As these collections grow over time, it is increasingly important to establish effective data management strategies for the future. These strategies should accommodate the growing importance of sharing information with large numbers of interested parties. Technologies such as Geographic Information Systems (GIS) and the Internet play an important role in the development of an environmental data management strategy.

When managing environmental data for our clients, CRA focuses on several key objectives including efficiency, effectiveness, and accessibility. We have addressed these objectives when developing customized environmental data management systems for our clients. We also offer automated data verification and data validation of electronic data deliverables from the laboratories. CRA also integrates the data management process with other professional services including computer simulation and three-dimensional visualization.

2.4.2 REMOTE SENSING

CRA's Geographic Information Systems (GIS) specialists can integrate a wide variety of remotely sensed imagery into projects using state-of-the-art digital image processing systems. Aerial photography and satellite images can be used to bring ordinary lines and points on a map to life. Data users can visualize project sites more easily through the use of a digital image backdrop.

Digital images can be analyzed and used in a number of applications. For example, infrared images can show changes in the state of vegetation that are not apparent with regular photography, and thermal imaging can be used to pinpoint underground activity. These techniques are part of the IT Services suite of remote sensing capabilities.

2.4.3 GEOGRAPHIC INFORMATION SYSTEMS (GIS)

GIS provides powerful tools that integrate maps with databases. Our GIS specialists are experienced with most popular platforms including ArcGIS™, ArcInfo™, ArcView™, GeoMedia™, MapInfo™, and MapObjects™. We apply GIS and other technologies in disciplines including environmental site management, water resources, hydrogeology, remote sensing, and municipal infrastructure and facilities management.

GIS provides a natural framework for combining environmental databases with maps and aerial photographs. Our GIS specialists have developed customized applications integrating multiple types of information collected in the field to make it easy to access and analyze environmental databases with an intuitive graphical environment.

Much of CRA's land surveying is now conducted using Global Positioning Systems (GPS) technology. Our GPS capabilities allow us to accurately locate site features and incorporate this information directly into a GIS.

2.4.4 THREE-DIMENSIONAL VISUALIZATION

Three-dimensional visualization is effective for understanding and communicating complex environmental systems. Using state-of-the-art software tools, CRA has been successful at using three-dimensional visualization techniques for various types of environmental scenarios including:

- Topographic relief and digital aerial photography
- Above-ground facilities including buildings and storage areas
- Below-ground facilities including underground storage tanks and sewers
- Three-dimensional geologic models including block and fence diagrams
- Groundwater flow regimes
- Groundwater plumes and changes in groundwater chemistry over time

2.4.5 E:DAT™

CRA's Electronic Data Access Tool (e:DAT™) has been developed based on powerful GIS (Geographic Information System) and database management concepts. e:DAT provides quick and easy access to site maps and environmental databases and is a stand-alone data access tool requiring no additional database or GIS software.

This software package integrates data from site maps, photos, reports, and analytical chemistry. Modeling and 3-D visualization results can also be incorporated. e:DAT™ facilitates project meetings and presentations by providing quick and easy access to various views of maps, photos, and analytical data.

Another product, e:DAT Web™, provides an intuitive approach for accessing and sharing environmental data over the Internet. This software package offers superior flexibility, enabling the integration of geographic information with all types of tabular and visual electronic information. e:DAT Web™ can be used to share environmental monitoring data among project teams and regulatory agencies or to provide public access via a user-friendly website.

2.4.6 E:DAT ER™

e:DAT ER™ (Emergency Response) has been developed to manage hazardous and emergency response materials and provide vital information necessary in an emergency response situation. This is accomplished through the use of site maps and databases that contain essential information about hazardous and emergency response materials stored on site.

e:DAT ER™ provides site-specific critical emergency response information by incorporating various multi-media elements such as:

- Digital photographs
- Aerial photographs
- Video
- Sound

2.4.7 WASTE MANAGER™

CRA's Waste Manager™ software has been developed to track and report solid and hazardous waste information, shipments, and disposition. This custom software can be implemented to meet the needs of single or multiple facility operations. Waste Manager™ can be accessed on a single computer or can be configured to run on a local area network (LAN) or an Intranet.

CRA's Waste Manager™ offers the following features:

- Maintains detailed data on individual facility wastes, shipments, transporters, shippers, disposers, and container storage
- Provides disposal breakdowns by company, facility production unit/department, and waste type
- Handles various waste categories, e.g., solid, hazardous, recycled, non-hazardous oilfield waste, commercial, and other user-defined categories
- Produces date-sensitive alerts for items such as stored wastes and expiring approvals
- Generates various waste summary and status reports
- Supports EPA Biennial Reporting System (BRS)
- Maintains multi-level user access security
- Exports data for use with other data management systems

Other modules that can be incorporated in the Waste Manager™ software, as needed, include Container Management, Manifest Printing, and Chemical Tracking modules.

2.4.8 SOFTWARE DEVELOPMENT

CRA offers a wide range of custom software development capabilities. We specialize in the development of information management tools for Windows environments and the Internet. In many cases, commercial "off-the-shelf" software programs do not readily

meet all our clients' requirements. Whenever possible, we extend the capabilities of commercial products by developing powerful new tools and features.

CRA's eSolutions Group offers the expertise to develop state-of-the-art software in the following areas:

Database Management. CRA develops custom database management applications for our clients using Microsoft Access™, Visual FoxPro™, and Visual Basic™. These applications have been developed to meet various needs including industrial waste management, environmental monitoring data management, and environmental health and safety.

Geographic Information Systems (GIS). GIS has become an invaluable spatial information management and analysis tool useful for many applications including environmental management, computer simulation, natural resources planning and management, water resources management, and infrastructure management. Our skilled GIS specialists and programmers can provide custom solutions using most popular technologies including ArcView™, Arc/Info™, and MapObjects™.

Internet/World Wide Web. CRA can provide database management and GIS solutions on the Internet using industry-leading technologies such as MapObjects™ Internet Map Server™, Microsoft IIS™, Microsoft Access™, HTML, Java, and Active Server Pages (ASP).

SCADA (Supervisory Control and Data Acquisition). CRA provides its clients with state-of-the-art SCADA solutions. CRA's skilled programming specialists can provide custom solutions using popular SCADA technologies including Wonderware, FIX Dynamics, RSView, and Plantworks.

2.4.9 GRAPHIC DESIGN

CRA's eSolutions Group has a staff of talented graphic designers who can provide unique design solutions for any project. Our graphic designers utilize the latest software to create outstanding communication materials for our clients. Whether traditional print media or contemporary multimedia presentation materials are required, we offer the technical expertise and understanding of the environmental and engineering fields to create designs that reflect the scope and complexities of the project.

Our professional staff offers the ability to produce the following products:

- Traditional print media and graphic design
- Interactive multimedia presentations
- Animation
- Graphical interfaces
- Website design and maintenance
- Interactive flash websites
- In-house video, editing, and compositing
- Traditional/digital photography
- Scanning and photo editing
- 3-D design

2.4.10 INTERNET/INTRANET SERVICES

Internet technologies have become the predominant means for sharing information with others. CRA has continued to guide our clients by harnessing the benefits of the World Wide Web. CRA's diverse range of applications and custom solutions can improve efficiency in project management and simplify daily activities. CRA's Internet services range from designing and maintaining a simple website to developing state-of-the-art applications that provide integrated database and mapping capabilities. Our full range of Internet services includes:

- Web page design
- Internet application (database, GIS) design and development
- Web page, domain name hosting (i.e., www.yoursite.com)
- Intranet (private Internet) services

CRA provides our clients with website, database management, and GIS solutions on the Internet using industry-leading technologies such as MapObjects™, Internet Map Server™, Microsoft IIS™, Microsoft Access™, HTML, Java, and Active Server Pages (ASP).

2.5 OTHER SUPPORT SERVICES

2.5.1 GROUNDWATER RESOURCES/HYDROGEOLOGY

Groundwater resources and hydrogeology services have been a primary area of expertise for CRA for over a quarter century. These services are provided directly to clients involved in water supply projects, and as support services to other CRA engineering and environmental projects. CRA's hydrologists, hydrogeologists, and geologists provide expertise in both contaminant and water supply hydrogeology. CRA's groundwater resource/hydrogeology services include:

- Hydrogeologic formation characterization and testing
- Water supply master planning
- Design of extraction and injection systems
- Pumping station and storage reservoir design
- Design of groundwater monitoring networks
- Design of hydraulic containment systems
- Design of in situ treatment systems
- Groundwater flow and contaminant transport modeling
- Evaluation of intrinsic remediation/natural attenuation
- Ecological/wetland assessments and mitigation plans
- Regulatory compliance and permitting assistance
- Geophysical assessments
- Cost allocation based on fate and transport quantification

2.5.2 RISK ASSESSMENT

The successful resolution of environmental issues while operating a profitable business is a management challenge in today's business world. The key is understanding the impacts of chemicals in the environment on human health and ecological resources. Human health risk and ecological risk assessments are used in the risk management process to determine if remedial action is necessary to protect public health and the environment. The use of risk assessment in the risk management process allows industry to focus available funds on the most critical problems.

CRA has offered risk assessment services for more than 25 years, applying "good science" techniques of reasonable exposure assumptions and applicable toxicological effects. CRA has developed expertise in the areas of environmental toxicology and risk assessment and has substantial experience in dealing with proposed and promulgated risk assessment regulations throughout North America. CRA's objective is always to achieve a balance between reasonable, practical solutions to environmental problems involving issues of risk and the requirements of the relevant agencies. CRA's specialists have extensive experience in the following areas:

- Baseline human health risk assessment under various environmental program requirements
- Chemical fate and transport evaluation and modeling
- Exposure and toxicity assessments
- Development of Conceptual Site Models (CSMs)
- Determination of alternative, risk-based cleanup criteria
- Development of and petitions for Alternate Concentration Limits (ACLs)
- Ecological risk assessments
- Endangered species and critical habitat evaluations
- Coastal zone permitting
- Risk-based closure analysis
- Natural Resource Damage Assessment (NRDA) claim expertise
- Wetlands delineation and jurisdictional determinations

2.5.3 INNOVATIVE TECHNOLOGIES

CRA's Innovative Technology Group consists of a core group of members dedicated to identification, evaluation, and application of innovative approaches for the remediation of chemical contamination. The goal of the group is to assist in reducing overall site remediation costs through the identification, assessment, and implementation of viable technologies with a focus on in situ technologies.

The Innovative Technology Group assists CRA Project Managers in the review and recommendation of innovative approaches for site remediation. The group has specialized laboratory facilities for chemical analyses and handling of toxic and hazardous materials, clean rooms for organism isolation and fermentation, and scale-up facilities for treatment system assembly, process development, and testing. These

facilities are used for the performance of a variety of treatability studies as well as the development and housing of specialized mobile equipment for biological treatment, soil vapor extraction, air stripping, and activated carbon treatment.

Technology areas that the group is currently working in include the following:

- Enhanced Natural Attenuation
- Chemical Oxidation
- Reactive Barriers
- Engineered Wetlands
- Phytoremediation
- Biological Treatment
- Physical/Chemical Treatment

2.5.4 SURFACE WATER RESOURCES

CRA provides expertise in all areas of surface water resource services. Due to the diversity of our ecosystem, surface water resource applications span a wide spectrum of technical areas. Virtually every environmental, civil, and municipal undertaking involves water resources engineering to some degree.

CRA surface water resource services include:

- Hydrologic and hydraulic modeling
- Watershed/subwatershed management and planning
- Design of stormwater management and conveyance systems
- Floodplain mapping and field surveys
- Shoreline erosion and flood control
- Stream/lake water quality assessment and improvements
- Assimilative capacity studies
- Wetland mitigation plans

3.0 CORPORATE QUALITY ASSURANCE/QUALITY CONTROL

CRA firmly believes that corporate quality assurance/quality control is essential to delivering the consistent quality service expected by our clients. CRA's quality commitment to our clients is reflected in our Quality System Policy statement, which reads:

> *"We will continually improve the quality of our services through the implementation of a Quality Management System and ongoing training of our employees.*
>
> *Our objective on all projects is to meet and exceed the expectations of our Clients by providing quality services in a responsive, safe, and cost-effective manner."*

CRA is registered under the ISO 9001:2000 international standard in Consulting, Engineering, and Design Services. There are 35 CRA locations where our Quality Management System is registered.

CRA's success at meeting and exceeding clients' needs is evidenced by the high percentage of repeat business that CRA has experienced and the results of client feedback questionnaires. The following is a summary of the results of client feedback received under our ISO 9001:2000 Quality System Program through April 2005.

Adherence to Project Scope	98%	Excellent or Good
Cost Effectiveness	89%	Excellent or Good
Schedule and Deadline Completion	94%	Excellent or Good
Responsiveness	96%	Excellent or Good
Overall Performance	96%	Excellent or Good
Client Expectations	97%	Met or Exceeded

In addition to our ISO 9001:2000 Quality Management System, CRA has developed and implemented extensive in-house training programs to ensure quality and consistency across the organization. These programs include project management training, standard operating procedures for all field-related activities, health and safety training, and contract specification preparation, along with frequent seminars and presentations regarding laws, regulations, and new technologies.

4.0 HEALTH AND SAFETY

It is CRA's belief that our employees are the company's most valuable resource and that they deserve the right to practice their profession in a safe working environment. Safety ranks as the highest priority of commitment by CRA's senior management. As evidence of this commitment, CRA dedicates a Shareholder to oversee and monitor CRA's overall health and safety program.

CRA's health and safety program is called **S**afety **M**eans **A**wareness **R**esponsibility **T**eamwork (**SMART**). The **SMART** program was developed to provide the foundation for continuous improvement in our safety performance and serve as a vehicle by which we sustain the importance of health and safety management in our daily activities. Our goal with respect to safety performance is for each employee to consider safety a service that we provide to our clients.

Health and safety procedures are addressed and outlined in CRA's ISO 9001:2000 Quality System (QS) and in our corporate health and safety program. CRA strives to provide a sound and minimal risk work environment for each employee through the prevention of accidents, occupational illness, and injuries. CRA prepares a site-specific Health and Safety Plan (HASP) for every site at which CRA is working and field staff have potential airborne and/or chemical exposures that may exceed published occupational exposure values.

All CRA employees are required to complete a training matrix form on which their supervisor can identify all of the specific job function training, QS training, and health and safety training that they will be required to complete. This training matrix is reviewed and updated annually as part of each employee's performance review. Once the supervisor has identified all training that will be required, the supervisor then arranges for the employee to receive the training. This training may include courses that can be delivered live by our own internal staff, by a qualified external trainer, or on-line.

Employees are not permitted to work in the field until they have satisfactorily completed all required regulatory and company-specific training. New hires at CRA are also required to initially conduct their field assignments under the watchful eye of a more senior employee.

5.0 CORPORATE EXPERIENCE

Over the past 28 years, CRA has worked on thousands of projects throughout North America, as well as internationally on almost every continent. The scope of our experience ranges from small, single-discipline projects to complex, multi-million-dollar design-build projects.

CRA's clients have included hundreds of individual and multi-site commercial and industrial companies, an impressive group of Fortune 500 corporations, the legal profession, public utilities, regulated branches of governments, and the World Bank, as well as countless towns, cities, and municipalities. Within CRA's environmental work, our focus has been primarily on working for the industrial/commercial market (i.e., the regulated community) rather than the regulators. With respect to CRA's municipal infrastructure projects, we have provided a broad range of engineering services for numerous small, medium, and large municipalities, as well as private developers and builders.

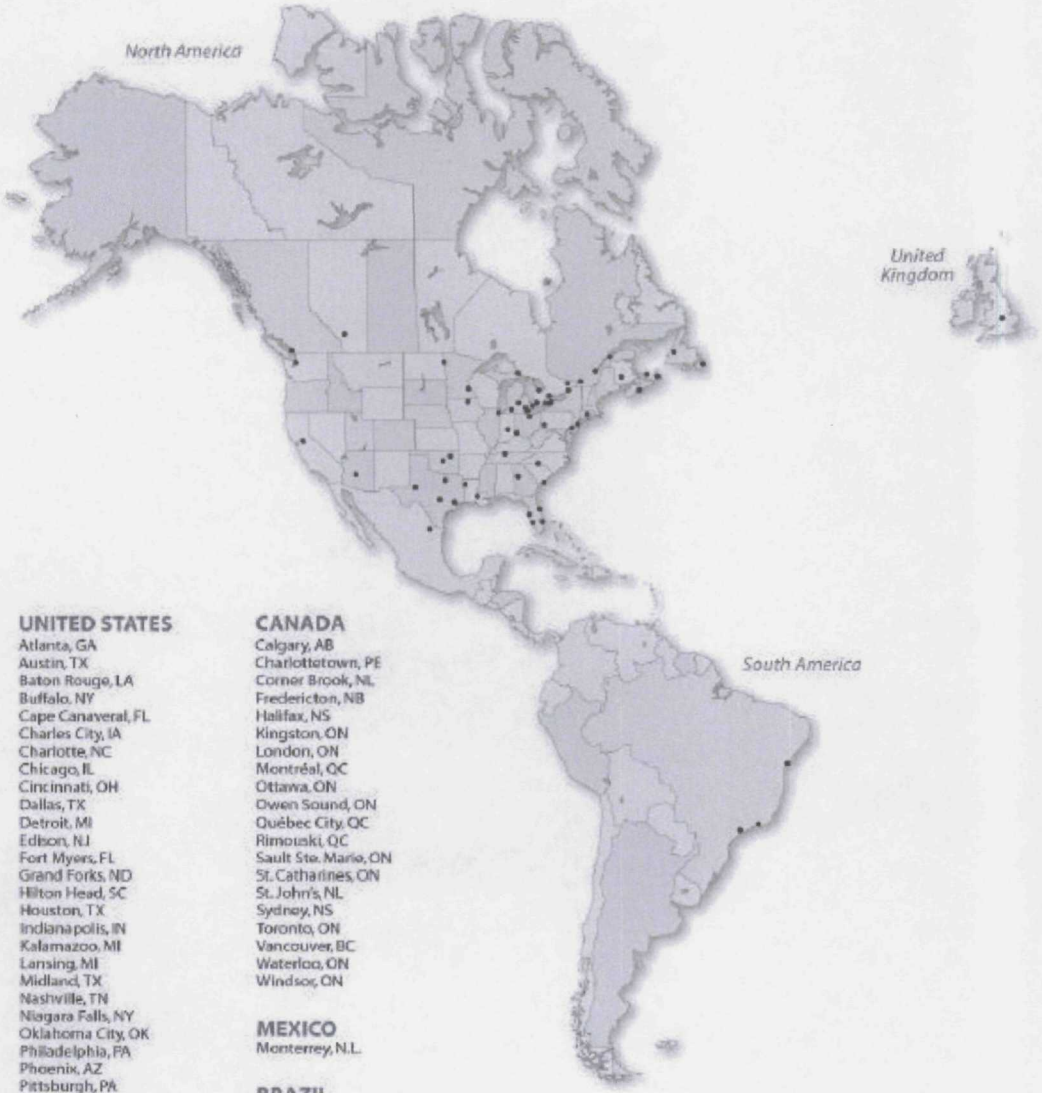
We have historically experienced very low turnover rates, especially among senior professional staff. This is a key factor in our long-term success. With our low turnover rate, the continuity of our senior staff permits a "long-term" view on ongoing projects and allows for effective mentoring and development of junior and intermediate staff by the Shareholders, Associates, and other senior professionals in the firm.

A selected list of projects that are representative of the broad scope of professional services completed and/or ongoing by CRA is presented in Table 5.1.

6.0 OFFICE LOCATIONS

WE BRING OUR EXPERTISE TO YOU

CRA's seamless organizational structure enables us to bring our expertise from personnel in any office or member of the CRA Family of Companies to any project, regardless of location.



UNITED STATES
Atlanta, GA
Austin, TX
Baton Rouge, LA
Buffalo, NY
Cape Canaveral, FL
Charles City, IA
Charlotte, NC
Chicago, IL
Cincinnati, OH
Dallas, TX
Detroit, MI
Edison, NJ
Fort Myers, FL
Grand Forks, ND
Hilton Head, SC
Houston, TX
Indianapolis, IN
Kalamazoo, MI
Lansing, MI
Midland, TX
Nashville, TN
Niagara Falls, NY
Oklahoma City, OK
Philadelphia, PA
Phoenix, AZ
Pittsburgh, PA
Plainville, CT
Sandusky, OH
Shreveport, LA
St. Paul, MN
Stockton, CA
Tacoma, WA
Tampa, FL
Tulsa, OK
West Palm Beach, FL

CANADA
Calgary, AB
Charlottetown, PE
Corner Brook, NL
Fredericton, NB
Halifax, NS
Kingston, ON
London, ON
Montréal, QC
Ottawa, ON
Owen Sound, ON
Québec City, QC
Rimouski, QC
Sault Ste. Marie, ON
St. Catharines, ON
St. John's, NL
Sydney, NS
Toronto, ON
Vancouver, BC
Waterloo, ON
Windsor, ON

MEXICO
Monterrey, N.L.

BRAZIL
Rio De Janeiro, RJ
Salvador, BA
São Paulo, SP

UNITED KINGDOM
Nottingham, England

TABLE 5.1

GENERAL PROJECT REFERENCES

	Work Description	*Location of Work*	*Owner or Client*
1.	Engineering, Hydrogeologic Services, Landfill Design Approval Process, Operation and Maintenance Inspection/Reporting, Interim Expansion Engineering and Approvals, Environmental Assessment (EA) Process for Expansion	Landfill Site London, ON	Green Lane Landfill (formerly St. Thomas Sanitary Collection)
2.	Field Investigation and Reporting, Conceptual and Final Design, Specification Writing, Field Supervision of Remedial Action	Love Canal (Landfill), Niagara Falls, NY	City of Niagara Falls
3.	Conducted Phase I Environmental Assessments on 80 industrial and commercial properties. Followed up by Phase II studies, as required	Montreal, Quebec City and Sherbrooke, PQ	Société Immobilière Trans-Québec Inc. (SITQ)
4.	Remedial Investigation/Feasibility Study, Design of Remedial Measures, Management of Remedial Construction at Landfill and Adjacent Surface Water Bodies, and 550 gpm Groundwater Collection and Treatment System	Landfill Hardeman County, TN	Velsicol Chemical Corporation
5.	Design and Project Management of Remedial Cleanup	Chemical Tank Train Derailment Mississauga, ON	City of Mississauga and Regional Municipality of Peel
6.	Field Investigation, Conceptual and Final Design, Field Supervision of Remedial Action, Preparation of RCRA Part B Applications, Groundwater Protection Plan, Post-Closure Monitoring	Industrial Waste Landfill Fridley, MN	FMC Corporation

TABLE 5.1

GENERAL PROJECT REFERENCES

	Work Description	*Location of Work*	*Owner or Client*
7.	Carried out geotechnical investigations and environmental characterizations of the site. Inspec-Sol conducted all inspection, testing and supervision services related to the placement of foundations, backfilling and compaction, concrete, asphalt, environmental clean-ups, roofing and waterproofing membranes. This "Fast-Track" project was carried out 7 days/week and 24 hours/day	CASINO de Montréal Phases I, II and III Expo '67 Fairgrounds	Casiloc Inc.
8.	Design and installation of major modifications to phenolic resin and molding compound production lines to expand product range. Major equipment items from a defunct sister plant were refurbished and used in the project to minimize cost and meet schedule.	Fort Erie, ON	Durez Products
9.	Hydrogeologic Investigation, Remedial Investigation, Remedial Design, Supervision of Remedial Construction (PCB Contamination in Creek Sediments and Plant Facility)	Manufacturing Facility London, ON	Westinghouse Canada Inc.
10.	Hydrogeologic Review, Alternative Landfill Design, Leachate Control and Treatment, Environmental Impact Assessment	100-acre Landfill Site Sarnia, ON	City of Sarnia
11.	Hydrogeologic Investigation, Reporting, Design, Evaluation of Remedial Action Alternatives, RCRA Part B Permit Application, Remedial Design (Barrier Wall and Groundwater Containment System), Remedial Construction Supervision, Sewer Rehabilitation Design	Manufacturing Facility Rotterdam Junction, NY	Schenectady International Inc.

TABLE 5.1

GENERAL PROJECT REFERENCES

	Work Description	*Location of Work*	*Owner or Client*
12.	Hydrogeologic Investigation, Environmental Assessment, Landfill Design, Performance Monitoring, Landfill Gas and Leachate Management	175-acre Landfill Site Waterloo, ON	Regional Municipality of Waterloo
13.	Evaluation of Hydrogeologic Study and Review of Analytical Database (Pentachlorophenol Spill)	Penticton, BC	Greenwood Forest Products
14.	Remedial Investigation/Feasibility Study, Interim Response Action, Regulatory Negotiations	Former Coal Gasification Plant Minneapolis, MN	Minnegasco
15.	As Special Master to US Federal Court, Manage, Design and Administer Cleanup and Disposal of Drummed and Tanked Hazardous Wastes, Recovery of Commercial Products, and Demolition of Facility	Former Oil Refinery East Chicago, IN	U.S. Federal Court Re: Energy Cooperative Inc.
16.	Design/build a 3rd Stage Chiller to liquefy chlorine thus eliminating the use of carbon tetrachloride in the manufacturing process.	Muscle Shoals, AL	Occidental Chemical
17	Inspec-Sol carried out geotechnical investigations and studied methods of repair and reconstruction of heavy duty pavements associated with mobile gantry cranes and storage areas for stacks of containers. Then supplied inspection and testing services during reconstruction	Port of Montreal Piers 46, 47 Montreal, PQ	Port of Montreal
18.	Trout Lake Watershed Management Study	North Bay, ON	North Bay/Mattawa Conservation Authority

TABLE 5.1

GENERAL PROJECT REFERENCES

	Work Description	*Location of Work*	*Owner or Client*
19.	Municipal Water Treatment Plant (Well Water) Design and Construction Oversight - 80,000-gpd capacity	Embro, ON	Zorra Public Utilities Commission
20	Landfill Gas Utilization Review, Field Testing Program, Gas Collection System Design, Construction Supervision	Upper Ottawa Street Landfill Hamilton, ON	Regional Municipality of Hamilton-Wentworth
21.	Remedial Investigation/Feasibility Study and Risk Assessment Critique, Remedial Design/Remedial Action, Vadose Zone Treatability Study, Negotiation of Consent Decree, Vadose Zone Modeling	Hassayampa Landfill Maricopa County, AZ	PRP Group
22.	Design, Implementation of Bioremediation System for Oil Tar Wastes	Former Coal Gasification Plant Port Stanley, ON	Ultramar Canada
23.	Quality control of earthwork, concrete and asphalt during overhauling and waterproofing of concrete slabs, new parapets and piers, and placement of new asphalt on expressways having the heaviest traffic congestion in Montreal	Metropolitan and Decarie Expressways Montreal, PQ	Transport Quebec
24.	Environmental Assessment, Site Investigations, Design of Remedial Measures, Supervision of Remedial Construction for over 300 Manufacturing and Retail Facilities	Across North America	J.I. Case Company
25.	Design of Elevated Water Storage Tank With a Volume of 500,000 gallons	Dorchester, ON	North Dorchester P.U.C.

TABLE 5.1

GENERAL PROJECT REFERENCES

	Work Description	*Location of Work*	*Owner or Client*
26.	Site Investigation, Design, Construction, Supervision of Waste Containment Facility, Groundwater Modeling, Design and Construction of Groundwater Collection and Treatment (Ultraviolet-Oxidation) Systems, Buried Waste Remedial Plan, Surface Water Modeling, Biomonitoring	Manufacturing Facility Elmira, ON	Uniroyal Chemical Ltd.
27.	Major retrofit consisting of replacement of switchgear, modification of utility power line, take-off structure harmonic filters, transformer, rectifier assembly, remote control panel, auxiliary systems and modification of existing busbar system.	Delaware City, DE	Occidental Chemical
28.	Development of Site Work Plan and Implementation of Waste Characterization, Consolidation/Disposal Program for Tanked/Drummed Waste	Fisher-Calo Site Kingsbury, IN	Fisher-Calo Steering Committee
29	Site characterization along 12 km (7 miles) of three major regional open storm drainage water courses. The Quebec government considered them to be abandoned waste disposal sites	Dorval, Pointe-Claire and Pierrefonds, PQ	Ministry of Environment of Quebec (MENVIQ)
30.	Project Management of Asbestos Decontamination, Partial Demolition including PCB Decommissioning	Asbestos Products Manufacturing Complex Manville, NJ	Manville Sales Corporation
31.	Site Investigation of Pentachlorophenol Contamination, Remedial Design	Lumby, BC	Bell Pole Company Limited

TABLE 5.1

GENERAL PROJECT REFERENCES

	Work Description	*Location of Work*	*Owner or Client*
32.	USEPA Remedial Investigation/Feasibility Study Review, Remedial Design/Remedial Action Work Plan, Hydrogeologic Investigations, Monitoring, Drum Removal (25,000 drums), Remedial Design, Reporting	Metamora Landfill Site, Lapeer County, MI	PRP Group
33.	Review of Meltzer Creek Watershed Natural Environmental Features; Watershed Hydrogeologic Flow Model; Analysis of Development Impact on Existing Wetlands and Cold Water Stream; and Stream Base Flow and Water Quality Augmentation Methods	Waterloo, ON	City of Waterloo
34.	Geotechnical studies for the development of a village including a Band Office, Church, Community Center, Health Clinic, Arena, Police Station, etc. Field supervision of subsequent construction operations	Ojemiska Lake, Far Northern Quebec	Ouje-Bougoumou Development Corp. c/o Douglas Cardinal Architect Ltd.
35.	Landfill Gas Investigation, Utilization, Feasibility, Construction of Gas Collection System, Tendering of Gas Utilization	Landfill Site Waterloo, ON	Region of Waterloo
36.	Hydrogeological study and groundwater characterization of a window and door manufacturing facility	St. Appolinaire, PQ	Bay West Inc.
37.	Site Servicing Development and Evaluation Plan for a Proposed Industrial Subdivision	Bruce County, ON	Canadian AGRA

TABLE 5.1

GENERAL PROJECT REFERENCES

	Work Description	*Location of Work*	*Owner or Client*
38.	Geometric Design, Intersection Improvements, Final Design Drawings and Contract Document Preparation, Construction Oversight and Contract Administration for 2 km Roadway Reconstruction Drainage Improvements, and Widening	Fisher-Hallman Road Kitchener/Waterloo, ON	Regional Municipality of Waterloo
39.	Feasibility Study, Remedial Design/Remedial Action, Vadose Zone Treatability Study, Negotiation of Consent Decree, Soil Removal	Tucson International Airport NPL Site Tucson, AZ	PRP Group
40.	Design/Build of a Communal Water Treatment System, Consisting of Aeration and Filtration and Storage Reservoir. Average Flow 100,000 gpd	Woolwich, ON	Village Development Ltd.
41.	Design of 1,800 m of 450 mm Diameter Trunk Sewer, Including a Section Constructed Within an Existing Box Tunnel and a Section Within the Bedrock of the Thames River	Trunk Sewer St. Marys, ON	Town of St. Marys
42.	Comprehensive Air Emissions Inventory; Review of Applicable Federal and State requirements; and, Title V Operating Permit Strategies	Phenolic Resin Plant Kenton, OH	Occidental Chemical Corporation
43.	Phase I/II Site Assessment, Prepare Work Plan under Indiana Voluntary Remediation Program, Remediation Oversight/Reporting (Received Certificate of Completion and Covenant Not to Sue)	Manufacturing Facility Berne, IN	Masco Corporation
44.	Design and installation of control systems at multiple sites allowing remote operation of all sites from one location thus reducing manpower requirements.	Niagara Falls, NY	Glenn Springs Holdings, Inc.

TABLE 5.1

GENERAL PROJECT REFERENCES

	Work Description	*Location of Work*	*Owner or Client*
45.	Roadway Flooding Cause Investigation; Alternative Remedial Designs; Public Participation Program; and Recommendations for Preferred Alternative	Village of Ayr, ON	Township of North Dumfries
46.	Development of Remedial Action Plan for the Relocation of a Closed Municipal Landfill Containing 200,000 Tonnes of Mixed Solid Waste. Excavation, Hauling Protocols, Health and Safety Plan Development, Agency and Public Consultation and Site Closure Reporting	Brock North Landfill Pickering, ON	Municipality of Metropolitan Toronto
47.	Water Quality Audits of Sample Collection Techniques for EAA Surface Water Pump Facilities	South Florida	South Florida Water Management District
48.	Site Assessment, Focused Feasibility Study to Remove and Replace USTs, Oversight, Closure Assessment, Reporting	Manufacturing Facility Traverse City, MI	Masco Corporation
49	Hydrogeologic Evaluation, Development of Final Design and Operation Plan, Design of Long-Term Monitoring Program, Implementation of Long-Term Monitoring Program	Millstream Landfill, Victoria, BC	Highwest Recycler Ltd.

TABLE 5.1

GENERAL PROJECT REFERENCES

	Work Description	*Location of Work*	*Owner or Client*
50.	Inspection, testing and supervision of: excavation, blasting, and pile-driving operations; concrete mixes and placement operations; backfill materials, placement, and compaction; structural steel assembly and erection; placement of reinforcing steel bars; placement of roofing and water-proofing membranes; installation of granite panels and anchors; and preparation of quality assurance manual.	United States Embassy Ottawa, ON	Axor Group Inc.
51.	Indoor Air Quality Monitoring	Langley, BC	Canada Trust

Enclosure B

CONESTOGA-ROVERS
& ASSOCIATES

Detailed project summaries for all of the Ohio and other Region 5 projects have previously been provided to ITW. CRA will be happy to resubmit this or provide any additional project experience documentation upon request.

PROJECT TEAM EXPERIENCE

CRA's project team will include personnel who have significant experience with landfill projects in USEPA Region 5, particularly in Ohio. CRA's project team is shown on Figure 1 and will include the following individuals.

Principal-in-Charge/Project Manager- Stephen M. Quigley, P.E. (Waterloo, Ont)
Mr. Quigley will act as the Project Manager and will be responsible for ensuring that the goals and objectives of the project are met and the appropriate resources are available to the project team. Mr. Quigley will participate in agency negotiations and other project activities. Mr. Quigley is a professional engineer (licensed in Delaware, Arizona, New Hampshire, and Ontario). Mr. Quigley is a Principal of CRA and manages the Edison, New Jersey, Exton (Philadelphia), Pennsylvania and the Plainville, Connecticut offices. Mr. Quigley has been involved in environmental site assessments and investigations under the CERCLA, Resource Conservation and Recovery Act (RCRA), and various State/Provincial regulatory programs. Mr. Quigley has also been involved in the negotiation, design, and construction of remedial projects throughout North America.

Mr. Quigley's specific experience related to RI/FS scoping includes the following projects:

- Jadco-Hughes Superfund Site - principal technical negotiator for the RI/FS, RD/RA, interim removal action, and explanation of significant difference (ESD) to the Record of Decision (ROD) for the Site;
- Hassayampa Landfill Superfund Site - principal technical negotiator for the FS and RD/RA, including the application of a modified and streamlined Superfund Accelerated Cleanup Model (SACM) for the RD/RA;
- Tucson International Airport Superfund Site - principal technical negotiator for the RI/FS and RD/RA for the Site. Was successful in obtaining the first Technical Impracticability (TI) waiver in USEPA Region 9 for this site;
- Scovill Landfill Superfund Site - principal technical negotiator for the RI/FS for the Site. CRA's client elected to refuse to complete Phase I of the RI due to unreasonable financial assurance requirements imposed by USEPA and unreasonable requirements for the RI. CRA's client then assumed the RI after Phase I of the RI. CRA completed the next phase of work after negotiating a reasonable technical scope; and

- Other similar roles at other sites including: Northline Drum Site; Air Pro Site; Old Mack Site; Parker Landfill Superfund Site; Dartron Parcel of the Diamond Shamrock Superfund Site; the Motorola 52nd Street Superfund Site OU2; Jackson Drop Forge Site; Gilbert & Bennett Site; and others.

Senior Technical Advisor- Ian K. Richardson, P.E. (Waterloo, Ont)
Mr. Richardson will act as the Senior Technical Advisor. Mr. Richardson is a professional engineer (licensed in Michigan, Ohio, Kentucky, Indiana, and Ontario) and is also a Certified Professional (CP) under Ohio EPA's Voluntary Action Program (VAP). Mr. Richardson is a Principal of CRA and manages the two CRA offices in Ohio (Cincinnati and Sandusky) and CRA's Information Technology (IT) Group. Mr. Richardson has been involved in environmental site assessments and investigations under CERCLA, RCRA, and various State/Provincial regulatory programs. Mr. Richardson has also been involved in the scoping, negotiation, design, and construction of many remedial projects throughout North America.

Mr. Richardson's specific experience related to RI/FS scoping includes the following projects:

- G&H Superfund Site – principal technical negotiator for the PRPs on the components of the final containment remedy for the Site;
- Valleycrest Landfill Superfund Site – principal technical negotiator for the PRPs on the reduction in scope for the second phase of the removal action activities;
- Hilltop Landfill – senior advisor on the conceptual design of post closure remedial enhancements to reduce PRPs ongoing O&M costs;
- Garland Rd Landfill – senior advisor to the PRPs on remedy selection; and
- Involved in Multiple RFI/CMS projects in Region V under RCRA including the GM Moraine Facilities on Dryden Rd.

Project Coordinator – Henry P. Cooke (Cincinnati, OH) Mr. Cooke will act as the Project Coordinator and will be responsible for ensuring that client needs are met and that the professional services provided by CRA are of the highest quality. Mr. Cooke will monitor the progress of work tasks assigned to other project team members on an ongoing basis with due regard for quality, budget, and schedule. Mr. Cooke is a professional engineer (licensed in Ontario) with approximately 15 years of environmental experience, including significant experience with Superfund sites and identifying and negotiating appropriate work requirements with federal and state agencies. Mr. Cooke is an Associate at CRA and manages the Cincinnati, Ohio office.

Mr. Cooke's specific experience related to RI/FS scoping includes the following projects:

- Pristine, Inc. Superfund Site - negotiated an ESD to allow the use of low temperature thermal desorption instead of thermal incineration for the treatment of approximately 13,000 tons of impacted soil and sediment;
- Pristine, Inc. Superfund Site - negotiated an ESD to waive anti-degradation regulations from applying to treated groundwater being discharged to a surface water body; and
- Carter Industrials Site - assisted in the negotiations for a ROD amendment to revise the remedy from on-site low temperature thermal desorption and capping of the site to off-site disposal of impacted soils.

Project Engineer - Peter W. Schwarz (Cincinnati, OH)
Mr. Schwarz will act as the Project Engineer. Mr. Schwarz has been involved in environmental site assessments and investigations under CERCLA for over 10 years. Mr. Schwarz has extensive experience in environmental sample program design and implementation, coordination of field investigation programs, report preparation, and interfacing with regulatory personnel at the field level.

Mr. Schwarz's specific experience related to RI/FS scoping includes the following projects:

- Valleycrest Landfill Superfund Site - principal technical professional in revising the scope of work for the second phase of the removal action activities and participated in negotiations with USEPA. Revised protocol resulted in estimated savings of approximately $8 M for the second phase of work;
- Valleycrest Landfill Superfund Site - assisted in negotiating with USEPA approval for on-site treatment of waste and was principal technical professional in determining appropriate scope of work. On-site treatment of waste resulted in an estimated savings of approximately $5 M versus off-site disposal; and
- Other similar roles at other sites - Hilton Davis site and Case New Holland site.

Quality Assurance/Quality Control (QA/QC) - Steven Day (Waterloo, Ont)
Mr. Day will act as the QA/QC Officer and Project Chemist. Mr. Day is an Associate of CRA and holds a Bachelor's degree in chemistry with over 20 years of analytical and environmental chemistry experience. During his 14 years at CRA, he has been QA officer for over 250 CERCLA, RCRA, State-led, and private sector projects. Mr. Day's professional experience as QA officer includes laboratory procurement, data validation and assessment, and data management. In addition, he has extensive experience in evaluating data to assess transport

and fate mechanisms and natural attenuation processes of petroleum hydrocarbons and halogenated volatile organics in soil and groundwater.

Senior Hydrogeology Advisor- J. Richard Murphy (Waterloo, Ont)
Mr. Murphy will act as the Senior Advisor on Hydrogeology related matters. Mr. Murphy is a hydrogeologist and professional engineer (licensed in Ontario) with 15 years of experience. Mr. Murphy is a Principal of CRA and manages the Hydrogeologic Evaluation and Modeling Group, which services all of CRA's projects. Mr. Murphy has technical expertise in hydrogeologic characterization and remedial design, groundwater flow, and contaminant transport modeling, and natural attenuation evaluation and in assessing vapor intrusion issues at chlorinated solvent sites. Mr. Murphy has been involved in a wide variety of environmental characterization, contaminant fate and transport analyses, and remedial design/monitoring projects throughout North America and has served as an expert witness on a number of occasions.

Health & Safety - Craig S. Gebhardt (Niagara Falls, NY)
Mr. Gebhardt will act as the Health and Safety Officer. Mr. Gebhardt is a Senior Health and Safety Manager with CRA with over 20 years of relevant experience in industrial and environmental consulting/engineering environments. Mr. Gebhardt has approximately 15 years of experience in the development, implementation, and oversight of Health and Safety Plans for environmental investigation and remediation projects across New York and much of the eastern United States. Mr. Gebhardt has also been responsible for the development and implementation of safety training programs, health and safety standard operating procedures, medical surveillance programs, air monitoring, and industrial hygiene sampling programs for both hazardous waste sites and general industry. He has conducted numerous site health and safety audits at commercial, industrial, and hazardous waste operations.

Human Health Risk Assessment - Stephen J. Foster, Ph.D. (Philadelphia, PA)
Dr. Foster has over 18 years of professional experience in the development of cleanup goals and risk assessments for the environmental consulting industry. He is also the primary author of over 90 human health and ecological multi-pathway or multi-chemical risk assessments under CERCLA, RCRA, and State led programs. Dr. Foster has been involved with the permitting of incinerators, coal fired power stations, trash to energy plants and manufacturing projects. Many of these projects have been controversial and high profile. Dr. Foster has managed risk and exposure assessment projects for chemicals with cancer and non-cancer end points, and derived cleanup goals for sites containing multiple chemicals as part of chemical remediation and bioremediation processes. Additionally, he has examined chemical breakdown pathways for the degradation of chlorinated solvents at hazardous waste sites and developed work and project plans for risk assessments under CERCLA, RCRA and State-led sites, including evaluation of vapor intrusion issues.

Ecological Risk Assessment - Daniel W. Smith, Ph.D. (Philadelphia, PA)
Dr. Smith will act as the Ecological Risk Assessor. Dr. Smith holds a Bachelor's degree in Molecular Biology; a Master's degree in Ecology; and a Ph.D. in Limnology. Dr. Smith is certified as a Senior Ecologist by the Ecological Society of America. Dr. Smith has over 15 years experience in environmental consulting. His areas of expertise include Natural Resource Damage Assessment; Ecological Risk Assessment, including Monte Carlo exposure analyses and quantitative assessment of ecological impacts; computer modeling of water quality and fate/transport mechanisms; and ecology and pollution of the Great Lakes. Dr. Smith has also provided critical reviews of proposed regulations and Agency science, some of which have subsequently been published. Dr. Smith has also published numerous articles in the peer-reviewed literature on polychlorinated biphenyls (PCBs) and other contaminants in aquatic ecosystems.

Geotechnical Engineer - Bruce Polan (Waterloo, Ont)
Mr. Polan will act as the Project Geotechnical Engineer. Mr. Polan has over 17 years of experience in geotechnical and environmental consulting engineering, and construction materials inspection and testing. Mr. Polan has been involved in numerous geotechnical projects in North America. Projects have involved residential, commercial, and industrial buildings, road construction and reconstruction, storm and sanitary sewer installations, slope stability and bank stabilization, construction dewatering issues, and construction materials testing for infrastructure upgrades (trunk watermains).

Surface Water Management - Brian Verspagen (Waterloo, Ont)
Mr. Verspagen will act as the Project Surface Water Management Expert. Mr. Verspagen is experienced in site plan preparation, floodplain and watershed studies and storm water management planning requiring knowledge of issues relating to hydrology, hydraulics, erosion, and water quality. Project experience includes watershed master planning, floodplain and floodway studies, storm water management, preparation of erosion and sediment control plans, USEPA National Pollutant Discharge Elimination System (NPDES) storm water pollution prevention plan preparation for construction and manufacturing activities, water balance studies, storm water quality improvement design and stream assessment and rehabilitation. Mr. Verspagen is also experienced in the application of Geographic Information System (GIS) technologies for site planning activities and hydrologic and hydraulic analysis of watersheds.

Many members of the project team (Ian Richardson, Henry Cooke, Steve Day, Craig Gebhardt, and Pete Schwarz) form the project team that is currently implementing a large-scale CERCLA RI/FS and removal action for a 100-acre former landfill in Dayton, Ohio. This project team has been very effective in scoping and negotiating an appropriate scope of work for the PRPs.